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Notice of Allowability	Application No.	Applicant(s)	
	10/027,839	SUUMAKI ET AL.	
	Examiner	Art Unit	
	Venkatesh Haliyur	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--
 All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

- 1. ☒ This communication is responsive to 04/13/2007.
- 2. ☒ The allowed claim(s) is/are 1-3 and 6-9.
- 3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 - 1. ☒ Certified copies of the priority documents have been received.
 - 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

- 4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 - 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
- 6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

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|---|--|
| <ul style="list-style-type: none"> 1. <input type="checkbox"/> Notice of References Cited (PTO-892) 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____ 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit of Biological Material | <ul style="list-style-type: none"> 5. <input type="checkbox"/> Notice of Informal Patent Application 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____ 7. <input type="checkbox"/> Examiner's Amendment/Comment 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance 9. <input type="checkbox"/> Other _____ |
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The following is an examiner's statement of reasons for allowance:

1. The prior art of record fails to teach and render obvious the limitations as amended in claim 1,

A method comprising:

configuring a plurality of compression methods in a terminal communicating with a packet-switched mobile system, wherein characteristics parameters are specified for a terminal, the characteristic parameters comprising at least one of the compression methods supported by the terminal, and wherein a functional entity is configured in a radio network for configuring the compression method to a radio bearer, the method further comprising:

configuring at least one of the compression methods in the system on simultaneous radio bearers of the terminal in said functional entity on the basis of the characteristics parameters transmitted by the terminal,

allowing a user of the terminal to update the parameters specifying the compression methods of the terminal in the terminal,

modifying the characteristics parameters of the terminal in accordance with said update,

transmitting the modified characteristics parameters to said functional entity comprised by the radio network, and

configuring the use of a compression method for each simultaneous radio bearer on the basis of the modified characteristics parameters; and wherein

the packet-switched mobile system is the UMTS system and the functional entity of the radio network for specifying the compression method for a radio bearer comprising a radio resource control protocol and a message specifying the characteristics parameters is a UE capability information message comprising at least a selection parameter for the header field compression method for data packets supported by a convergence protocol of the terminal.

2. The present invention is related to UMTS (Universal Mobile Telecommunication System) and IMT-2000 (International Mobile Telephone System) which provides not only circuit-switched services, but also provides packet-switched services, for instance in the manner of the packet radio network GPRS (General Packet Radio Service) designed for the GSM system. Packet-switched data transmission enables the use of different data services by means of a mobile station and, on the other hand, the allocation of the resources of a mobile system, especially the radio interface, to each user as is necessary.

When a packet-switched connection is used, the radio resource management RRM system of the UMTS system allocates parameters to a radio bearer, the parameters specifying the properties of the radio bearer used. One of the parameters specifying a radio bearer is the method of compressing the header fields of the data packets used by the terminal. In the UMTS system, header fields are compressed in data packets to be transmitted and decompressed in data packets to be received on a packet data convergence protocol layer PDCP belonging to the packet data protocol.

Several header field compression methods supported by a terminal are typically configured for it.

In the present development versions of the UMTS system, the header field compression method to be used on a radio bearer is configured in such a way that before a connection is set up, the terminal informs the radio access network RAN of the compression methods supported by the terminal.

The RAN uses this information to decide whether header field compression is to be used on the packet-switched connections of said terminal, and which compression method is used. The problem in the above arrangement is that the user of a terminal has no effect on whether or not header field compression is used on packet-switched connections. Header field compression is often preferable, since it allows the limited radio resources to be used more efficiently to transfer payload.

However, situations and applications exist wherein header field compression is not preferable, such as when the limited processing capacity of a terminal is to be saved or if the compatibility of applications requires this on a radio bearer. In the UMTS system, the user of a terminal cannot configure header field compression so as to be suitable for each particular situation, but, instead, the configurations set by the RAN are used on all data links, i.e. PDP contexts (Packet Data Protocol Context) of the terminal.

A method of configuring compression methods for header fields (PCOMP, Protocol control information Compression, also known as HCOMP, Header Compression) and user data (DCOMP, Data Compression) is known from the GSM-based GPRS system, wherein a header field and user data compression method is

negotiated for each PDP context upon activation of the PDP context by means of a context identifier CID field. This allows the user of the terminal to influence the compression parameters to be used and whether compression is to be used at all. However, such a negotiation mechanism does not exist in the UMTS system. This is why a suitable way to offer the user of a terminal a chance to influence the configuration of compression methods has to be found for the UMTS system.

The present invention of the applicant(s) is based on the idea of offering the user of a mobile station a chance to influence the use of a compression method by modifying the characteristics parameters of the mobile station, particularly the parameters specifying the compression methods used, whereby the characteristics parameters to be communicated to the radio network are changed in accordance with the settings made by the user. In response to a change, the mobile station is arranged to transmit the modified characteristics parameters to the radio network, which then configures a compression method to be used or not to be used on all radio bearers of the mobile station in accordance with the settings made by the user.

The method and mobile station of the invention provide the advantage that they offer the user of a terminal a chance to influence the configuration of the compression methods used. Another advantage is that the invention can be preferably implemented as an internal change in the mobile station, whereby no changes are preferably needed in the mobile system, its network elements or the data transmission used in the system. A further advantage is that the changes made by the user of the terminal in the characteristics parameters are not critical to time, but the user may make the changes

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either before the activation of a PDP context(s) or after at least one PDP text is activated.

llw
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